

PEREYASLOVA, N.K.

PHASE I BOOK EXPLOITATION SOV/1297

Vsesoyuznyy nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabilnykh izotopov i izlucheniyy v narodnoy khozyaystve i nauke, Moscow, 1957

Polucheniye izotopov. Nauchnyye gamma-ustanovki. Radiometriya i dosimetriya: trudy konferentsii. (Isotope Production. High-energy Gamma-Radiation Facilities. Radiometry and Dosimetry. Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 293 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.

Editorial Board: Prolov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Leintsov, A.K., Alekseyev, B.A.; Bochkarev, V.V., Lashchinskiy, N.I.; Krikov, T.P., Sintsev, V.I., and Popova, O.L. (Secretary); Tech. Ed.: Novichkov, N.D.

REMARKS: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

TABLE OF CONTENTS:

PART I. PRODUCTION OF ISOTOPES

Prolov, Yu.S., V.V. Bochkarev, and Ye.Ye. Kulish. Development of Isotope Production in the Soviet Union. This report is a general survey of production methods, apparatus, materials, applications, investigations and future prospects for radio isotopes in the Soviet Union. Card 2/12

Lentratov, M.P., V.Ye. Manoylov, and O.A. Myazdrikov. A Photocolorimetric Method of Beta-Dosimetry. 246
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Card 11/12

PEREYASLOVA, N. K.

"The Spectroscopic Characteristics of the Soviet-made Multipliers,"

A conference ~~ies~~ on Electron and Photo-Electron Multiplier; Radiotekhnika i Elektronika, 1957, Vol. II, No. 12, pp. 1552-1557 (USSR)

Abst: A conference took place in Moscow during February 28 and March 1, 1957 and was attended by scientists and engineers from Moscow, Leningrad, Kiev and other centres of the Soviet Union. Altogether, 28 papers were read and discussed.

L 23432-66 FSS-2/EWT(1)/FCG/EWA(d)/EWA(h) TT/GW

ACC NR: AP6012832

SOURCE CODE: UR/0293/66/004/002/0268/0279

AUTHOR: Avdyushin, S. I.; Kogan, R. M.; Nazarova, M. N.; Pereyaslova, N. K.;
Petrenko, I. Ye.; Svidskiy, P. M. 33
B

ORG: none

TITLE: Recording cosmic rays by the Cosmos-17 satellite

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 2, 1966, 268-279

TOPIC TAGS: cosmic ray, cosmic ray measurement, cosmic ray shower/Cosmos 17

ABSTRACT: Scintillation counters, STS-5 Geiger counters, and SBT-9 end-window Geiger counters were used on Cosmos-17 to record the intensity of cosmic radiation beyond the Earth's radiation belts as a function of L coordinates. The average radiation intensity was found to vary from 0.5 to 3.0/cm²/sec for charged particles and from 9 to 22/cm²/sec for gamma quanta. A high-latitude chopping of the cosmic ray spectrum was observed for hardness R = 1.8. A cosmic ray "equator" was constructed for altitudes of 400-600 km. Cosmic ray showers produced by the interaction of high-energy particles with the satellite body at angles of divergence exceeding 60° were also recorded. The showers had the following average characteristics: particle density, 0.038/cm²; total number of particles, 10²; ratio of the number of photons to the number of corpuscles, 11.3. Orig. art. has: 4 figures and 2 tables. [JR] 2

SUB CODE: 07/ SUBM DATE: 19Apr65/ ORIG REF: 010/ OTH REF: 005/ ATD PRESS:
Cord 1/1 *Adm* UDC: 537.591:629.19 4235

S/148/60/000/008/002/018
A161/A029

AUTHORS: Chuyko, N.M.; Rutkovskiy, V.B.; Konishchev, M.P.; Perevyazko, A.G.; Tregubenko, A.F.; Yatskevich, I.S.; Zabaluyev, I.P.; Kurganov, V.V.; Bobkov, T.M.; Antipenko, G.I.

TITLE: A New Smelting Technology Under White Slag for Ball Bearing Steel of Grade ШХ15 (ShKh15)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. - Chernaya metallurgiya, 1960, No. 8, pp. 38 - 47

TEXT: At the "Dneprospetsstal'" Works up to 1956 ShKh15 steel was teemed simultaneously with slag and no attention was paid to steel treatment by slag in the ladle during the teeming. The final S content of 0.02% was obligatory and the refining took between 2 h 10 min and 2 h 40 min or more. The refining time had been cut down to 1 h 50 min - 2 h 10 min by addition of ferrochrome into non-reduced metal with a content of 0.025% S. To boost the heat process and to improve the metal quality, N.M. Chuyko suggested to cut the refining time to 1 h 10 min or less by deoxidation and desulfuration of the metal with electric furnace slag in the ladle during teeming. The article contains details of this new

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A161/A029

A New Smelting Technology Under White Slag for Ball Bearing Steel of Grade ШХ15 (ШХ15)

technique. The effect of the oxidizing and reducing heat period factors was determined. The formation of highly-basic and well deoxidized slag was mainly studied. The slag quantity used was 4 - 5% of the metal weight with a CaO content of over 55%, FeO below 0.4% and CaF₂ below 2.0%. First a considerable quantity of slag was spilled through a widely open hole into the ladle, and then metal poured from 3 - 4 m height in a solid jet, which brought about a large contact area with slag and rapid deoxidation and desulfuration. The optimum parameters of the oxidation period were stated to be: $\Delta[C] = 0.3 - 0.5\%$ at a carbon burning rate of 0.4 - 0.5%/h, and a metal temperature of 1,545 - 1,565°C before skimming the oxidizing slag. The reducing period under lime-chamotte white slag with low calcium fluoride content proved to be expedient, as well as the treatment of the metal in the ladle by this slag. The optimum slag composition is: (FeO) < 0.5%; (CaF₂) = 1 - 2%; $\Sigma(SiO_2 + Al_2O_3) = 31 - 34\%$; (CaO) > 53%; (MgO) < 12%, and $\Sigma(CaO + MgO) = 63 - 65\%$. The optimum metal temperature before teeming is 1,550 - 1,570°C; it ensures the filling of a 2.8-ton ingot during 165 - 190 sec. Final deoxidation of steel by aluminum in the ladle gives a high reduction of oxygen content (over 30%). The quantity of nonmetallic inclusions in

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A161/A029

A New Smelting Technology Under White Slag for Ball Bearing Steel of Grade 15
(ShKh15)

steel was slightly lower than usual in steel smelted in the usual process under carbide slag with long refining. There are 7 figures, 5 tables and 7 Soviet references.

ASSOCIATIONS: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute); zavod "Dneprospetsstal'" ("Dneprospetsstal' Works)

SUBMITTED: November 12, 1959

Card 3/3

S/073/60/026/001/011/02
B004/B054

AUTHORS: Krasovitskiy, B. M., Pereyaslova, D. G., and Titarenko, N.I.

TITLE: Effect of Steric Factors on Properties of Dyes Containing a Biphenyl Ring. XIV. Comparative Study of Color and Affinity to Cotton of Some Azo Dyes Which Are Derivatives of Biphenyl Dibenzy, Trans-stilbene, Tolan, and Azobenzene

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No 1, pp. 73-77

TEXT: The authors studied the effect of conjugated double bonds on the affinity of dyes to cotton. Aш(Ash) acid in alkaline medium was used as azo component [Abstracter's note: This acid is not defined in the present paper]. The following were used as diazo components: benzidine (I); 4,4'-diamino-dibenzy (V); 4,4'-diamino-trans-stilbene (VI); 4,4'-diamino-tolan (VII); 4,4'-diamino-azobenzene (VIII); 4,4'-diamino-p-terphenyl (IX); and 3,3'-diamino-azobenzene (X). The absorption spectra were taken by an CФ-2M(SF-2M) spectrophotometer. The affinity to cotton was determined at 80°C and 100°C by measuring the decrease in dye concentration of the solution.

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Effect of Steric Factors on Properties of Dyes
Containing a Biphenyl Ring. XIV. Comparative
Study of Color and Affinity to Cotton of Some
Azo Dyes Which Are Derivatives of Biphenyl.
Dibenzyl, Trans-stilbene, Tolan, and Azobenzene

S/073/60/026/001/011/021
B004/B054

by an Φ K-M (FEK-M) photocolormeter. The following data are given in
Tables 1-3:

Diazo component	$\lambda_{\max}$, m μ	Affinity kcal/mole	
		80°C	100°C
I	595	4.45	3.73
V	556	2.97	1.45
VI	600	5.75	4.70
VII	580	4.83	3.97
VIII	609	5.12	4.19
IX	566	6.00	5.26
X	540	3.18	2.74

In all compounds in which the conjugation of double bonds is interrupted (V, X), the affinity to cotton decreases. A replacement of the ethylene bridge of VI by the acetylene bridge of VII also reduces the

affinity. Z. V. Oleynikova assisted in the experiments. There are 3 tables and 26 references: 12 Soviet, 6 British, 4 French, 4 German, 1 Italian, and 1 Swiss.

Card 2/3

Effect of Steric Factors on Properties of Dyes
Containing a Biphenyl Ring. XIV. Comparative
Study of Color and Affinity to Cotton of Some
Azo Dyes Which Are Derivatives of Biphenyl,
Dibenzyl, Trans-stilbene, Tolan, and Azobenzene

S/073/60/026/001/001/001
B004/B054

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im A. M. Gor'kogo
(Khar'kov State University imeni A. M. Gor'kiy);
Khar'kovskiy institut Sovetskoy torgovli (Khar'kov Institute
of Soviet Commerce)

SUBMITTED: July 9, 1958

Card 3/3

30V/120-58-5-22/32

AUTHORS: ~~Peroyaslova~~, N. K., Kirdina, G. A.

TITLE: Growing CsI Crystals and Investigation of Their Luminescent Properties (Vyrashchivaniye kristallov CsI i issledovaniye ikh lyuminestsentnykh svoystv)

PERIODICAL: Pribury i tekhnika eksperimenta, 1958, Nr 5, pp 86-90 (USSR)

ABSTRACT: A brief account is given of a technique employed for growing large crystals of CsI. The growth chamber was a flask well insulated from thermal and mechanical disturbances and surrounded by a heater coil whose temperature was maintained very precisely at 650°C along most of its length, for a period of about 2 hours. A diaphragm insulated this coil from a lower, coaxial coil at 525°C, which served to heat up a CsI/TlI solution as it was drawn from a reservoir. When enough solution was drawn into the flask the current was switched off and the solution allowed to cool at a rate of about 1° per minute. The resulting crystals of almost pure CsI contained less than 0.008% by weight of Tl. Two large crystals, one of 320 g and the other of 70 g were selected for spectrometric examination. Each in turn was mounted in a γ-ray spectrometer and irradiated by an 8 μcurie γ-ray source (RaTh). Brief particulars of the geometry and

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Growing
perties

30V/120-55-5-2/32
CsI Crystals and Investigation of Their Luminescent Pro-

shielding are given. The induced spectra were examined and compared with the spectrum obtained by replacing the CsI(Tl) crystals by a 170 g NaI(Tl) standard crystal. The intensity and half-lives of the following emissions were studied:
 $E_{\gamma} = 0.314 \text{ Mev}, 0.662 \text{ Mev and } 1.12 \text{ Mev}.$

The 0.662 Mev line was found to be the most intense, the 1.12 Mev line next, and the 0.314 Mev line weakest. All the lines were found to be characterised by a 0.5 μsec half-life in caesium and a 0.25 μsec half-life in sodium.

Card 2/3

SOV/120-58-5-22/32

Growing CsI Crystals and Investigation of Their Luminescent Properties

Acknowledgements are made to Z. L. Morgenshtern and R. M. Kogan for their assistance. The text contains 7 figures, 1 table and 7 references (3 English, 2 German and 2 Soviet).

ASSOCIATION: Institut prikladnoy geofiziki AN SSSR (Institute of Applied Geophysics, Academy of Sciences USSR)

SUBMITTED: July 20, 1957.

Card 3/3

Pereyaslova, N.K.
AUTHORS: Kogan, R.M. and Pereyaslova, N.K.

120-4-5/35

TITLE: Application of a Film-scintillator System for Recording of Gamma Radiation (Primeneniye sistemy fotoplenka-sintilliruyushchiy kristall dlya registratsii gamma-izlucheniya)

PERIODICAL: Priory i Tekhnika Eksperimenta, 1957, No.4, pp. 25 - 27 (USSR).

ABSTRACT: The application of a photographic film to the detection of gamma rays is well known. The present authors were confronted with the problem of measuring weak gamma ray intensities and also the variation of these intensities with time. The conventional photographic detection was found to be insufficiently sensitive. Consequently, the following system is adopted. A sodium iodide scintillator of the well type was covered with a film. Thus, the incident gamma radiation produces a blackening of the film both directly and also via the scintillations produced in the crystal. If the gamma ray intensity varies with time, it may be studied by passing a film continuously over the crystal. In this way, one obtains the gamma ray intensity as a function of time. It is shown that this system Card 1/2 is 10^3 - 10^4 as sensitive as the conventional film detector.

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 666

Author: Krasovitskiy, B. M., Pereyaslova, D. G., Kovalenko, O. D., and Sherbakova, L. I.

Institution: None

Title: Effect of Steric Factors on the Properties of Dyes Containing the Diphenyl Nucleus. III. Investigation of Disazo Dyes -- Derivatives of Biphenol, Phenanthrene, Phenazone, and Phenanthridone

Original
Periodical: Ukr. khim. zh., 1955, Vol 21, No 5, 614-618

Abstract: A comparative study has been made of the properties of disazo dyes (DAD) obtained from 2,7-diaminophenanthrene (I), 2,7-diaminophenazone (II), and 2,7-diaminophenanthridone (III) as the disazo constituent. The products obtained were compared with previously investigated DAD produced from benzidine (IV), 2,7-diaminofluorene (V), 2,7-diaminophenanthraquinone (VI), 2,7-diaminodiphenyl ketone, and other 2,7-diamines (see Communication II, Referat Zhur - Khimiya, 1956, 61902).

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USSR/Organic Chemistry - Synthetic Organic Chemistry, B-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 866

Abstract: I was prepared in 81% yield by the heating (5 hours at 225-230°) of 2,7-dibromophenanthrene with concentrated HNO_3 in the presence of Cu_2Cl_2 and powdered Cu in a sealed tube. II was prepared by the reduction of 2,2'-dinitrobenzidine with Na-Hg, while III was prepared by the saponification of the diacetyl derivative with 0.5 N KOH (refluxing 4 hours). The DAD were obtained by coupling the disazotized I-III with H-acid (VII), 1-naphthol-4-sulfonic acid (VIII), or 1-amino-8-naphthol-2,4-disulfonic acid (IX) in alkaline medium. DAD obtained from I or II with VII ($\text{I} \rightarrow \text{VII}$, λ_{max} 565 m μ , directness 55%) are close in color to DAD obtained from VI $\rightarrow$ VII and are considerably more intense than those from IV or V with VII; this is apparently due to the electron-acceptor properties of the ethylenic bridge in I and of the azo-group in II. In directness the dyes from I and II occupy an intermediate position between those from IV and VI with VII. The transition from the DAD from II to those from 3,3'-diaminoazobenzene (X) is characterized by the absence of diphenyl bonds, a sharp decrease in directness, and an intensification in the color (the composition of the dye, λ_{max} in m μ , ϵ_{max} , and directness in percent are indicated in that order): II $\rightarrow$ VII, 560, 40,000,

Card 2/3

~~PEREYASLOVSKIY, S.L.~~

This very year we'll obtain 100 centners of meat and 400 centners of milk per 100 hectares. Nauka i pered.op.v sel'khoz. 7 no.7:5-6 J1 '57.
(MLRA 10:8)

1.Predsdatel' kolkhoza "Chervonny Zhovten".
(Stock and stockbreeding) (Dairying)

PEREYEDCHIKOV, Vasilii Mikhaylovich; ZOSIMOV, Dmitriy Mikhaylovich,
glavnyy zootekhnik; GLYKMAN, N., red.; ISUPOVA, N., tekhn. red.

[Our experience in the loose housing of cows] Nash opyt besprivoznogo
soderzhanija korov. Simferopol', Krymizdat, 1960. 21 p.

(MIRA 14:12)

1. Direktor sovkhoza im. Timiryazeva, Krasnogvardeyskogo rayona (for
Pereyzedchikov).

(Dairy barns)

PEREYMER, I.Sh.

Pureeing machines for drupaceous fruit. Konz, i ov proz.
17 no.2:9-10 F '62. (MIRA 15.5)

1. Spetsial'noye konstruktorskoye byuro prodovol'stvennogo
mashinostroyeniya Odesskogo sovnarkhoza.
(Canning and preserving---Equipment and supplies)

Page 1, 1.

"Mathematical theory of formation of the ..."

p. 1 [Publications, Vol. 1, no. 1, 1973, Praha, Czechoslovakia]

Montreal, Quebec, Canada, September 1957

1,1977
Z/507/60/000/000/003/005
B125/B112

AUTHOR: Perez, Albert (Prague)

TITLE: Information theory and discernibility in the problems of
statistic decision

SOURCE: Conference on Information Theory, Statistical Decision
Functions, Random Processes. 2d, Prague, 1959.
Transactions. Prague, Czech. Academy of Sciences, 1960, 843p.
biblio. 413-497

TEXT: The general problem of the transmissibility of an information
source through a communication channel is investigated for abstract
alphabets. The "time" parameter can be either discrete or continuous.
The present paper is the continuation of that by A. Perez: Sur la theorie
de l'information dans le cas d'un alphabet abstrait (Transactions of the
First Prague Conference on Information Theory, Statistical Decision
Functions, Random Processes (1956), Prague 1957, pp. 209-243). The
probabilistic conception of discernibility is combined with the
conception of general risk inherent in the theory of statistic decision
functions. The earlier and the recent definition of the discernibility
Card 1/3

Information theory and discernibility ...

Z/507/60/000/000/003/005
B125/B112

are closely related by an "infimum power". The decision function of the infimum power makes it possible to achieve a mean risk smaller than the positive number ρ . The problem of transmissibility of an information source through a communication channel is a decidability problem with greater or smaller possibilities of coding. The coding is defined as a measurable transformation of the measurable input space into the space of the emission signals. The transmissibility can be understood also in the sense of the probabilistic discernibility and the mean risk. The totality of the information sources can be classified with respect to their transmissibility and the totality of the channels with respect to their transmission power. If one information source is transmissible through a given channel, any information source which has an absolute infimum rate of decision can be transmitted. The capacity C_2 defined in the mentioned previous paper retains its decisive role in most of the transmissibility problems of Shannon type. The infimum rate of information is equal to the respective infimum rate of decision.

Card 2/3

PEREZ, A.

"Mathematical theory of information. Pt.2 p. 81"

P. 81 (Aplikace Matematiky, Vol. 3, no. 2, 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAL) LC, Vol. 7, No. 7, July 1958

PERE-2, A.

16(2)

FRASE I BOOK EXPLOITATION CICH/2556
Conference on Information Theory, Statistical Decision Functions,
Random Processes. 1st, Liblice, 1956.

Transactions. Prague, Czechoslovak Academy of Sciences, 1957.
354 p. 1,000 copies printed.

Sponsoring Agency: Československá Akademie věd. Sekce Technická.
Reviewers: Václav Dupač and Miloš Jirina; Scientific Ed.:
Jaroslav Kořenek, Corresponding Member, Czechoslovak Academy
of Sciences; Hosp. Ed.: Luděk Böhme; Tech. Ed.: František
Kondráč.

PURPOSE: This book is intended for specialists interested in in-
formation theory and related subjects.

COVERAGE The book contains papers read at the First Prague Con-
ference on Information Theory, Statistical Decision Functions,
and Random Processes, held on November 28 - 30, 1956. The Con-
ference was sponsored by the Czechoslovak Academy of Sciences
and organized by the Institute of Radio Engineering and Elec-
tronics. The papers discuss various mathematical approaches to
the problems of communication: information theory, probability
properties of communication, stochastic processes of communi-
cation, entropy, transformations of stochastic processes, statis-
tical decision functions, randomized functional processes, and
other. Participants from China, Germany, Poland, Sweden, the
United States, and the Soviet Union were present at the Con-
ference. Of the 21 articles in the book, 14 are in English, 4
in French, 2 in German, and 1 in Russian.

Dual Rand. A. Spáček. (Czechoslovakia). Continuous Random Decision
Processes Controlled by Experience 43

Hanč, O. (Czechoslovakia). Generalized Random Variables 61

Hanč, O. Random Fixed Point Theorems 106

Hanč, O. Inverse and Adjoint Transforms of Linear Bounded Random
Transformations 127

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tributions 135

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Pérez, A. (Czechoslovakia). Generalized Concepts of Uncertainty, of
Entropy and of Information from the Point of View of the Theory of
Martingales 183

Pérez, A. On Information Theory in the Case of an Abstract
Alphabet 209

Pérez, A. On the Convergence of Uncertainty, Entropy, and Informa-
tion Samples Toward Their True Values 245

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Spáček, A. Extension of Probabilistic Transformations 259

Witlich, M. (Czechoslovakia). Some Theorems on Random Schwartz Dis-
tributions 273

Votavová, L. (Czechoslovakia). Theorems on the Extremes of Entropy 293

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and in Statistical Decision 297

AVAILABLE: Library of Congress

Card 5/5

15-1-13

PEREZ, A

"Generalized notions of uncertainty, of entropy, and of information from the viewpoint of the theory of martingales. In French."

p. 183 (Vol. 42, 1956, Prague, Czechoslovakia)

Monthly Index of East European Accession (MEEA) LC, Vol. 7, No. 8, August 1956

NIKL, J.; PEREZ, A.

Mechanism of erythrocyte sedimentation. Analysis of the sedimentation curve and its diagnostic significance. Cesk. fysiол. 13 no.4:315-324, J1 '64.

1. Ustav hematologie a krevni transfuze, Ustav teorie informace a automatizace Ceskoslovenske akademie ved, Praha.

PEREZ, A.

"The information theory in the case of an abstract alphabet. In French."

p.209 (Vol. 42, 1956, Prague, Czechoslovakia)

Monthly Index of East European Accession (MIEA) 10, Vol. 7, no. 3, August 1956

PEREZ, A.

"Convergence of uncertainties, entropies, and information samples to their mean value. In French."

p.245 (Vol. 42, 1956, Prague, Czechoslovakia)

Monthly Index of East European Accession (MEAI) LC, V 1. 7, No. 8, August 1968

PEREZ, A.

ical Engineering Abstracts
ical Engineering

621.385.2 : 621.3.014 : 537.543
2529. A study of current fluctuations in a planar diode, including the effect of space charge and transit time, on the basis of a multivelocity model. A. PEREZ. Czech. J. Phys., 1, No. 2, 49-61 (1952) In French.
The insufficiencies of the model which replaces the

real beam with one having an initial velocity equal to the mean initial velocity of the real beam are noted. A new model in which the convection currents due to the various groups of electrons of different velocities propagate along the beam without disturbing the mean state of the distribution is discussed. Results for the planar diode are obtained and are generally similar to those of North, in spite of the fact that the approximations necessary to carry out the calculations improve with increasing frequency. The present results predict somewhat higher noise currents than do North's figures.

A. H. W. BECK (R)

PEREZEL, A.

MAGYAR KÉMIAI LAPJA (JOURNAL OF THE HUNG. CHEMICAL SOC.)

VOL. V. 1950 No. 10 Oct.

A. Perezel; 535-53

The use of optical and electrical thermometers. pp. 506-512

Immediate source clipping

NIKL, J.; PEREZ, A.

Application of theoretical information methods in the study of relationships in biological systems. Cesk. fysiол. 10 no.5:454-460 '61.

1. Ustav hematologie a krevni transfuze a Ustav teorie informace a automatisace CSAV, Praha.
(BIOLOGY)

L 31091-66 EWT(d)/T/ENF(1) IJP(c)

ACC NR: AP6022835

SOURCE CODE: CZ/0088/65/000/004/0297/0323

AUTHOR: Perez, Albert (Doctor; Doctor of sciences)

ORG: Institute of Information Theory and Automation, CSAV, Prague (Ustav teorie informace a automatizace CSAV)

TITLE: Information, epsilon-sufficiency and data reduction problems

SOURCE: Kybernetika, no. 4, 1965, 297-323

TOPIC TAGS: information theory, data reduction, statistics, probability

ABSTRACT: In the frame of the Bayes model of statistical decision, an attempt is made to estimate in terms of information theory the change in average (or Bayes) risk caused by modification of the probability law in action. In particular, upper estimates are given of the increase in Bayes risk on passing from an initial decision problem to a reduced one resulting from the first by a reduction of the sample space σ -algebra as well as of the parameter space σ -algebra. The concept of ϵ -sufficiency is in a certain sense automatically involved in the above estimates as the decrease of information implied by the reduction. Orig. art. has: 88 figures. [Orig. art. in Eng.] [JPRS]

SUB CODE: 09, 12 / SUIM DATE: 03Feb65 / ORIG REF: 010 / SOV REF: 001
OTH REF: 002

Cord 1/1 CC

0915

0819

PEREZ, Albert, dr. DrSc.; TONDL, Ladislav, doc. dr. CSc.

The subject of cybernetics. Kybernetika 1 no.1:4-11 '66.

1. Institute of Information Theory and Automation of the
Czechoslovak Academy of Sciences, Prague 2, Vysehradaka
49. Submitted May 25, 1964.

Generalized Concepts of Uncertainty, Entropy and Information From the Viewpoint of the Theory of Martingales

2
1-FW

*Pérez, Albert. Notions généralisées d'incertitude, d'entropie et d'information du point de vue de la théorie de martingales. Transactions of the first Prague conference on information theory, statistical decision functions, random processes held at Liblice near Prague from November 28 to 30, 1956, pp. 183-208. Publishing House of the Czechoslovak Academy of Sciences, Prague, 1957. 354 pp. Kčs 34.00.

Following the work of Kullback and Leibler [Ann. Math. Statist. 22 (1951), 79-86; MR 12, 623] the author develops certain results extending the notions of uncertainty, entropy, and information in the case of abstract probability spaces. In particular, the author develops these ideas in relation to increasing sequences of sub- σ -algebras of the probability space, thereby making it possible to apply results from the theory of martingales and semi-martingales as developed by Doob [Stochastic processes, Wiley, New York, 1953; MR 15, 445]. Let $(X, \mathcal{X})$ be a measurable space. If $\mu \ll \lambda(\mathcal{X})$ and $f(x)$ is a version of the corresponding Radon-Nikodym density then $-\log f(x)$ is defined as the generalized uncertainty of μ with respect to λ at the point $x \in (X, \mathcal{X})$. The author's theorem 3 on the almost sure convergence of generalized uncertainties is: Let $\{\mathcal{X}_n\}$ be an increasing sequence of

sub- σ -algebras of $\mathcal{X}$ and let $\mathcal{X}_\infty$ be the σ -algebra generated by the algebra $\bigcup_{n=1}^{\infty} \mathcal{X}_n$. If $\mu \ll \lambda(\mathcal{X}_\infty)$ and $\{f_n(x), \mathcal{X}_n, 1 \leq n \leq \infty\}$ is the λ -martingale of respective densities with $\int \log f_\infty(x) d\mu$ finite, then the sequence of generalized uncertainties $\{-\log f_n(x)\}$ converges almost surely $[\mu]$ to the generalized uncertainty $-\log f_\infty(x)$. If $\mu \ll \lambda(\mathcal{X})$ and $f(x)$ the corresponding density with $\int \log f(x) d\mu$ finite, the preceding sequence of uncertainties converges to $-\log f(x)$ almost surely $[\mu]$ if and only if a version of the density $f(x)$ is measurable with respect to the σ -algebra $\mathcal{X}_\infty$, that is, if $\mathcal{X}_\infty$ is a sufficient σ -algebra for the system of measures $\{\mu, \lambda\}$. The author defines the generalized entropy of μ with respect to λ , relative to the σ -algebra $\mathcal{X}$, as the mean value with respect to μ of the generalized uncertainty, that is,

$$H_\lambda(\mu, \mathcal{X}) = - \int \log f(x) d\mu = - \int f(x) \log f(x) d\lambda.$$

The author's theorem 7 on the generalized entropy, using the notation defined for theorem 3, is: If $\lim_{n \rightarrow \infty} H_\lambda(\mu, \mathcal{X}_n)$ is finite then (i) a necessary and sufficient condition that the sequence of generalized uncertainties $\{-\log f_n\}$ converges in μ -mean is that $\mu \ll \lambda(\mathcal{X}_\infty)$, (ii) if this last condition is satisfied then $\lim_{n \rightarrow \infty} H_\lambda(\mu, \mathcal{X}_n) = H_\lambda(\mu, \mathcal{X}_\infty)$, (iii) if $\mu \ll \lambda(\mathcal{X})$ and $H_\lambda(\mu, \mathcal{X})$ is finite, a necessary and sufficient

Pérez, Albert

condition that $\lim_{n \rightarrow \infty} H_n(\mu, \mathcal{Z}_n) = H(\mu, \mathcal{Z})$ is that $\mathcal{Z}_n$ be a sufficient σ -algebra for the system of measures (μ, λ) on $\mathcal{Z}$. The author also derives some results on the discrimination between the probability measures μ and λ in terms of the generalized entropy. These include as a special case a limit theorem by McMillan [Ann. Math. Statist. 24 (1953), 196-219; MR 14, 1101]. Let $(X \times Y, \mathcal{Z} \times \mathcal{G}, \omega)$ be a probability space where the measurable space is the cartesian product of two measurable spaces $(X, \mathcal{Z})$ and $(Y, \mathcal{G})$. Let μ and ν be the marginal probability measures induced by ω on $\mathcal{Z}$ and $\mathcal{G}$ respectively. Suppose that $\omega \ll \mu \times \nu$ and $f(x, y)$ is the corresponding Radon-Nikodym density. The generalized information corresponding to the probability space $(X \times Y, \mathcal{Z} \times \mathcal{G}, \omega)$ is defined as $I(\omega, \mathcal{Z} \times \mathcal{G}) = \int \log f(x, y) d\omega$. The author relates this information value to the difference between a marginal entropy and a mean conditional entropy and derives a number of theorems similar to those on the generalized entropy. The author remarks that information can serve as a rational basis for a universal measure of the degree of stochastic dependence between two random variables since $I(\omega, \mathcal{Z} \times \mathcal{G})$ is zero if and only if the random variables considered are independent.

S. Kullback (Washington, D.C.)

2
I.F.W

Information Theory With an Abstract Alphabet

*Pérez, Albert. Sur la théorie de l'information dans le cas d'un alphabet abstrait. Transactions of the first Prague conference on information theory¹ statistical decision functions, random processes held at Liblice near Prague from November 28 to 30, 1956, pp. 209-243. Publishing House of the Czechoslovak Academy of Sciences, Prague, 1957. 354 pp. Kčs 34.00.

This is essentially a continuation of the author's work reviewed above with the aim of developing the general theory of information in which the alphabet may be any abstract measurable space. The author discusses a probabilistic notion of discrimination, and relates this to an increasing sequence of σ -algebras in the sample space and the generalized notions of uncertainty, entropy, and information. In particular the author derives a generalized version of the theorem on the E (equipartition) property by McMillan [Ann. Math. Statist. 24 (1953), 196-219; MR 14, 1101] and a generalized version of the fundamental lemma of Feinstein [Res. Lab. Electron. Mass. Inst. Tech., Tech. Rep. no. 282 (1954); MR 17, 1098], the generalization residing in the fact that the results previously found for the case of finite alphabets

are valid for any alphabets when the capacity of a channel is defined in terms of the generalized notions of informations and rate of transmission of information. The author considers extensions of the notion of transmissibility and derives results which permit of the ordering of sources of information considered as functions of their information rates with regard to their transmissibility through a communication channel. In particular, the theorem designated by Khinchin as the first Shannon theorem [Shannon, Bell System Tech. J. 27 (1948), 379-423, 623-656; MR 10, 133; Hincin, Uspehi Mat. Nauk (N.S.) 11 (1956), no. 1 (67), 17-75; MR 17, 1098; A. I. Khinchin (Hincin), Mathematical foundations of information theory; translated by R. A. Silverman and M. D. Friedman, Dover Publ., New York, N.Y., 1957; MR 19, 1148] is derived as a special case of the general results. S. Kullback (Washington, D.C.)

On the Convergence of Uncertainties, Entropies and Information to Their True Values

★Pérez, Albert. Sur la convergence des incertitudes, entropies et informations échantillon (sample) vers leurs valeurs vraies. Transactions of the first Prague conference on information theory, statistical decision functions, random processes held at Liblice near Prague from November 28 to 30, 1956, pp. 245-252. Publishing House of the Czechoslovak Academy of Sciences, Prague, 1957. 354 pp. Kčs 34.00. 1-F/W
2

This is essentially a continuation of the author's work reviewed above [#6325] to study the conditions for the convergence of sample uncertainties, entropies, and informations to their true values. The sample values of uncertainty, entropy and information are defined and suitable conditions derived. Space does not permit presenting the detailed definitions here.

S. Kullback (Washington, D.C.)

V Perez, Albert. Mathematical theory of information.
I. Apl. Mat. 3 (1958), 1-21. (Czech)

3w
1/1

16 2

PEREZ, Albert (Prague)

Information theory with an abstract alphabet; generalized forms of
McMillan's theorem for the case of discrete and continuous time.
Teor.veroiat. i ee prim. 4 no.1:105-109 '59. (MIRA 12:3)
(Information theory)

3
 / Pérez, Albert. Transformation ou σ -algèbre suffisante et minimum de la probabilité d'erreur. Czechoslovak Math. J. 7(82) (1957), 115-123. (Russian summary)

Let $M = \{\mu_i, i = 1, \dots, n\}$ be probability measures on a measurable space (X, S) with corresponding a priori probabilities $P = \{p_i\}$, $\sum p_i = 1$. The probability of error in deciding that the true measures are μ_i when $x \in B_i$, where the B_i form a (measurable) partition of X , is defined by $1 - \sum p_i \mu_i(B_i)$. A family of partitions is obtained with minimal probability ϵ of error. Then a nondecreasing sequence S_n of sub- σ -algebras and corresponding minimal probabilities ϵ_n of error are considered. It is proved that $\epsilon_n \rightarrow \epsilon$ if the σ -algebra generated by $\bigcup S_n$ is sufficient with respect to M , in fact, that, whatever be P , the minimal probability of error relative to a sub- σ -algebra S_0 coincides with ϵ if and only if S_0 is sufficient with respect to M .
 M. Loève (Berkeley, Calif.)

Card 1/1

PEREZ, Albert

Perez, Albert. *Théorie mathématique de l'information*.
~~II. *Appl. Math.* 3 (1958), 81-103.~~ (Czech. Russian and
 French summaries)

This article, appearing in two parts, is simultaneously a review of the basic concepts of information theory, and a presentation of generalizations of the chief theorems to discrete-parameter processes with arbitrary alphabets. Proofs are only sketched, and the reader is referred to the author's previous work. The first part contains a well-conceived analogy of information transfer to observation in statistical mechanics, and a discussion of a notion of stochastic distinguishability, partly due to Kolmogorov and fundamental to Feinstein's theorem. A notion of generalized entropy of one measure with respect to another is introduced, on which generalized forms of the usual notions of entropy, conditional entropy, etc., are based.

In the second part general forms of the theorems of McMillan, Feinstein, and Shannon are stated, for arbitrary alphabets and under assumptions of absolute continuity. The development largely follows Hincin's monograph, [*Uspehi Mat. Nauk* (N.S.) 11 (1956), no. 1 (67), 17-75; MR 17, 1098]. A closing section on continuous signals and applications refers to the sampling theorem as Kotelnikov's theorem, although the result in question is due to Cauchy [*C. R. Acad. Sci. Paris* 12 (1841), 283-298], and was rediscovered by Whittaker [*Proc. Roy. Soc. Edinburgh*, 35 (1915), 181-194].

V. E. Beneš (Murray Hill, N. J.)

1ST AND 2ND COORDS

PROCESSES AND PROPERTIES INDEX

COMMON ELEMENTS

OPEN

MATERIALS INDEX

ASD-51A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND COORDS

3RD AND 4TH COORDS

5TH AND 6TH COORDS

7TH AND 8TH COORDS

9TH AND 10TH COORDS

11TH AND 12TH COORDS

13TH AND 14TH COORDS

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17TH AND 18TH COORDS

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21ST AND 22ND COORDS

23RD AND 24TH COORDS

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41ST AND 42ND COORDS

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L 45674-66 ENT(m)/T WE
ACC NR: AP6023622

SOURCE CODE: UR/0318/66/000/004/0012/0015

AUTHOR: Agafonov, A. V.; Osipov, L. N.; Rogov, S. P.; Uzunkoyan, P. N.; Finkel'son, V. P.; Zhandanovskiy, N. B.; Porozhigina, I. Ya.; Kol'man, I. V.; Pisarchik, A. N.; Aranas'yev, V. I.; Khavkin, V. A.; Laz'yan, N. G.

ORG: All-Union Scientific Research Institute of Petroleum Refining (Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti); Novokuybyshev Petroleum Refinery (Novokuybyshevskiy neftepererabatyvayushchiy zavod)

TITLE: Experience with catalytic hydrocracking of vacuum distillate on the hydrofining assembly of the Novokuybyshev Petroleum Refinery

SOURCE: Neftepererabotka i neftekhimiya, no. 4, 1966, 12-15

TOPIC TAGS: catalytic cracking, petroleum product, gas oil fraction, diesel fuel, gasoline

ABSTRACT: The VNIINP has developed a variant of the process for producing diesel fuel involving one-step hydrocracking of sulfur-containing vacuum distillates on an aluminum-cobalt-molybdenum catalyst. The results of laboratory experiments with this variant were successfully applied at the experimental industrial hydrofining assembly of the Novokuybyshev Petroleum Refinery. The operation of the hydrocracking assembly is described. The feed stock for the plant hydrocracking was vacuum gas oil obtained from distillation of sulfur feed stock. Distillation of the hydrogenate produced:

Cord 1/2

UDC: 665.644.2.048.5:665.658.2

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diesel oil which met all the requirements of GOST 4749-49 for DL grade; a gasoline fraction characterized by a low sulfur content (0.002-0.03), a relatively heavy fractional composition (melting range 120-180°), and a low octane number (42), and is recommended as feed stock for catalytic reforming; the gaseous products methane (49.2 wt. %), ethane (29.4%), propane (17.8%) and butanes (3.65). The residue of the distillation of fuel fractions is recommended as feed stock for catalytic cracking. It is concluded that the hydrocracking of vacuum gas oil on the hydrofining assembly of NKNPZ confirmed the results of work carried out by the VNIINP on pilot plants for the purpose of designing high-capacity units. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 003

Cord 2/2 fv

Pereznosin, A. I.

Pereznosin, A. I. "An Absolute Survey of the Tashtagol'sk Iron-Ore Deposits." In the book: Geofizicheskie Metodi Razvedki v Zheleznoi Sibiri, Tomsk, 1956, p. 10-11.

PEREZHOZIN, A. T.

Perezhogin, A. T. "The Geophysical Work of the West Siberian Geological Trust in 1935." Vestnik Zapadno-Sibirskogo Geologicheskogo Tresta, No. 6, 1935, p. 41-43.

ALIMARIN, I.P.; PEREZHOVIN, G.A.

Determination of traces of gold by the radioactivation method
using substoichiometric separation. Zhur. anal. khim. 20 no.1:
48-54 '65. (MIRA 18:3)

1. Institut geokhimii i analiticheskoy khimii imeni Vernadskogo
AN SSSR, Moskva.

L 48608-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) JD/JG

ACCESSION NR: AP5009907

UR/0032/65/031/004/0402/0403

AUTHOR: Perezhogin, G. A.

TITLE: Neutron activation determination of rhenium in meteorites and molybdenites with the application of substoichiometric subdivision

SOURCE: Zavodskaya laboratoriya, v. 31, no. 4, 1965, 402-403

TOPIC TAGS: neutron activation, rhenium, meteorite, molybdenum, technetium

ABSTRACT: A radiochemical method for rhenium determination (with the application of substoichiometric subdivision) was worked out to simplify the procedure called for by the method described by W. Herr and W. Hoffmeister (Z. Naturforsch., 16a, 1053, 1961). It involves the separation of tetraphenylarsonium perrhenate, using an organic solvent (chloroform, dichloroethane, chlorobenzene, etc.) and of determining the radioactivity of the desired element. A scintillating γ -spectrometer provides the high selectivity necessary for identifying and measuring the R^{186} isotope. The author developed a new system for separating rhenium from technetium, and he describes it in some detail. The rhenium content was determined by the formula $m = m_s a/a_s$, where m_s is the known amount of rhenium in a standard compound, a and a_s are the activities of R^{186} in the specimen and in the standard, respectively. In Card 1/2

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ACCESSION NR: AP5009907

all, 7 meteorites (1 achondrite, 5 chondrites, 1 carbon-bearing) and 3 molybdenites were analyzed. The results are tabulated, showing the lowest rhenium content in the chondrites Saratov and Nikol'skoye (0.041 g/ton), the highest in a molybdenite specimen (100 g/ton). The American Norton County meteorite contains 0.071 g/ton. The relative mean-square error of the determination is 6%. Orig. art. has: 2 formulas and 1 table.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo, Akademii nauk SSSR (Institute of Geochemistry and Analytical Chemistry, Academy of Sciences SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: BP, IC

NO REF SOV: 001

OTHER: 006

Card 2/2

PEREZHOGIN, G.A.

Neutron activation determination of rhenium in meteorites and
molybdenites using substoichiometric separation. Zav. lab. 31
no.4:402-403 '65. (MIRA 18:12)

1. Institut geokhimii i analiticheskoy khimii im. V.I.
Vernadskogo AN SSSR.

L 33314-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AP5004429

S/0075/65/020/001/0048/0054

AUTHORS: Alimarin, I. P.; Perezhogin, G. A.

TITLE: Radioactivated determination of traces of gold by using substoichiometric separation

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 1, 1965, 48-54

TOPIC TAGS: stoichiometry, gold, zinc, copper, bismuth, lead tetraphenyl arsenium, tellurium, mercury, rhenium, technicium, osmium, extracting agent

ABSTRACT: Applicability of substoichiometric separation to rapid determination of traces of gold (as low as $5 \cdot 10^{-11}$ g) was studied. Extractions were found to depend on the coefficient of distribution of the reagent used in quantities insufficient to bind totally the element being determined. A minimum of 99% interaction between the reagent and the carrier of the analyzed element is necessary for the success of this method. The degree of separation depends on the ratios of extraction coefficients. Gold is measurable in hydrochloric acid solutions (few tenths molar acidity) of lead, bismuth, copper, and zinc (see Table 1 on the Enclosure). It forms precipitates with tetraphenyl arsenium. These precipitates

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ACCESSION NR: AP5004429

are easily soluble in chloroform. Due to the high selectivity of neutron activation analysis, measurements may be obtained without being disturbed by the presence of tellurium, mercury, rhenium, technicium, and osmium. Orig. art. has 14 formulas, 1 graph, and 2 tables.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moscow (Institute of Geochemistry and Analytical Chemistry, AN SSSR)

SUBMITTED: 30Mar64

ENCL: 01

SUB CODE: GC

NO REF SOV: 000

OTHER: 010

Card 2/3

L 33374-65

ACCESSION NR: AP5004429

ENCLOSURE: 01

Table 1. Gold content in pure metals

1) Образец	2) Вес образца, г	3) а, имп/мин	4) а _с , имп/мин	5) t _с , с	6) y, %	7) Содержание Au, %
Pb	0,5192	410 ± 8,1	7800 ± 80	7,9 · 10 ⁻³	4,1 · 10 ⁻¹⁰	7,9 · 10 ⁻³
	0,4320	316 ± 9,5	7800 ± 80	7,9 · 10 ⁻³	3,2 · 10 ⁻¹⁰	7,4 · 10 ⁻³
	0,9559	330 ± 4,5	5350 ± 60	1,2 · 10 ⁻³	7,4 · 10 ⁻¹⁰	7,7 · 10 ⁻³
	1,1619	325 ± 5,9	4500 ± 60	1,2 · 10 ⁻³	8,6 · 10 ⁻¹⁰	7,4 · 10 ⁻³
Bi	0,2560	1130 ± 30	5600 ± 100	1,2 · 10 ⁻³	3,06 · 10 ⁻⁹	1,2 · 10 ⁻³
	0,2453	2900 ± 45	5600 ± 100	1,2 · 10 ⁻³	4,3 · 10 ⁻⁹	1,7 · 10 ⁻³
	0,3051	3700 ± 50	5700 ± 100	7,9 · 10 ⁻³	5,4 · 10 ⁻⁹	1,8 · 10 ⁻³
Cu	0,1320	51,5 ± 3,2	4650 ± 80	1,2 · 10 ⁻³	1,4 · 10 ⁻¹⁰	1,06 · 10 ⁻³
	0,1177	45 ± 2,2	3900 ± 80	1,2 · 10 ⁻³	1,4 · 10 ⁻¹⁰	1,17 · 10 ⁻³
Zn	0,5888	1085 ± 11	5650 ± 80	1,2 · 10 ⁻³	1,45 · 10 ⁻⁹	2,5 · 10 ⁻³
	0,3100	82 ± 1,4	5600 ± 80	7,9 · 10 ⁻³	1,14 · 10 ⁻¹⁰	3,7 · 10 ⁻³

1) Specimen; 2) Weight of specimen; 3) Activity of ¹⁹⁸Au radioisotope a, imp/min; 4) Activity of standard a, imp/min; 5) Au content in standard y₀; 6) Au content in specimen y; 7) Au content %

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SHCHERBAKOV, Yu.G.; PEREZHOGIN, G.A.

Geochemistry of gold. Geokhimiia no.6:518-528 Je '64. (MIRA 18:7)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk i Institut geokhimii i analiticheskoy khimii imeni Vernadskogo AN SSSR, Moskva.

PEREZHOGIN, M.; DROBIZHEV, V.

Moscow Basin miners in the struggle for victory of the October
Revolution. Mast.ugl. 6 no.5:29-31 My '57. (MLRA 10:7)
(Moscow Basin--Coal mines)

PEREZHOGIN, G.A.; ALIMARIN, I.P.

Neutron-activation determination of gold in rocks and
meteorites. Zhur. anal. khim. 20 no.8:793-798 '65.
(MIRA 18:10)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.
Vernadskogo AN SSSR, Moskva.

L 45313-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6024294 SOURCE CODE: UR/0075/66/021/007/0879/0880

AUTHOR: Perezhogin, G. A. 32
6

ORG: Institute of Geochemistry and Analytical Chemistry im. V. I. Vernadskiy,
Academy of Sciences, SSSR, Moscow (Institut geokhimii i analiticheskoy khimii
AN SSSR)

TITLE: Determination of traces of manganese by neutron activation using
substoichiometric separation 21 19

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 7, 1966, 879-880

TOPIC TAGS: manganese, metal chemical analysis, neutron activation,
substoichiometric process , *STOICHIOMETRY*

ABSTRACT: A method has been developed for the determination of traces of
manganese in pure lead by neutron activation. Manganese can be substoichio-
metrically separated by the solvent extraction with dichloroethane of a certain

Cord 1/2

UDC: 543.53

1 45313-86

ACC NR: AP6024294

part of the carrier as tetraphenylarsonium permanganate. The method can be extended to other materials of high purity. Orig. art. has: 1 table. [Based on author's abstract] [KP]

SUB CODE: 07,20 / SUBM DATE: 26Jul65 / ORIG REF: 003 / OTH REF: 001 /

Card 2/2 mjs

L 58997-65 EWT(1)/EPA(w)-2/EWA(w)-2 P1-l/Pz-6 IJP(c) AT

ACCESSION NR: AR5016008

UR/0058/65/000/005/H083/H083

SOURCE: Ref. zh. Fizika, Abs. 5Zh554

AUTHORS: Sushkin, M. G.; Pereshogin, M. I.

TITLE: Experimental investigation of the trajectory of electrons in a magnetron gun

CITED SOURCE: Elektrotermiya. Nauchno-tekhn. sb., vyp. 37, 1964, 25-26

TOPIC TAGS: magnetron gun, electron trajectory, electron beam, electron optical bench, electron probe

TRANSLATION: The authors describe an installation (electron-optical bench) for the investigation of the structure of an electron beam and for finding directly the trajectory of the electrons in a magnetron gun. The installation consists of the gun proper and of an observation chamber, in which a movable fluorescent screen is placed. The mechanism for the displacement of the screen makes it possible to move the latter along the optical axis within a range of 500 mm, up to the cathode of the electron gun. Built into the focusing electrode of the gun is a special ring electrode with several apertures, in which a pin-like tungsten cathode can be mounted. This cathode forms a narrow electron probe, and this is the electron-beam

Card 1/2

L 58997-65

ACCESSION NR: AR5016008

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element produced by the magnetron gun. The coordinates of this element of the beam can be readily determined with the aid of the moving fluorescent screen. The apparatus makes it possible to carry out investigations at accelerating voltages of 7.5 and 15 kV. The results of the investigations of electron trajectories are presented for two modes of the magnetron gun. A. Kabanov.

SUB CODE: NP, EM

ENCL: 00

dm
Card 2/2

L 04217-67 EWT(1) IJP(c) AT
ACC NR: AR6015859

SOURCE CODE: UR/0275/65/000/012/A006/A006

AUTHOR: Sushkin, N. G.; Alferova, Ye. V.; Bash, Yu. M.; Perezhogin, M. I.; Khotina, A. V.

TITLE: Graphic construction of the trajectory of electrons in a magnetron gun

57
B

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 12A36

REF SOURCE: Tr. Vses. n.-i. in-ta elektroterm. oborud. vyp. 1, 1965, 50-65

TOPIC TAGS: particle trajectory, magnetron, electron gun

ABSTRACT: Powerful electron guns (up to 100 kw) for electron heating, with electrostatic focusing, require a high accelerating voltage (of the order of 25—35 kv) and are sensitive to changes in the dimensions and alignments of the electrodes. The possibility is considered of using a magnetic field for focusing the electrons. The magnetic field makes it possible to reduce anode voltage to 10—15 kv and reduce requirements for accuracy of adjustment of the anode and cathode. For validated calculation of the optical system, a graphic method has been developed for constructing electron trajectories in superimposed homogeneous and heterogeneous electric and axisymmetric magnetic fields. The electron trajectory is constructed on the meridional plane by the method of curvature radii $R = f(r, z)$, and the plane itself rotates together with the electron with an angular velocity $\Psi = f(t)$. The advantage of the method is the

Cord 1/2

UDC: 621.38

ACC NR: AR6015859

possibility of calculating electron trajectory not only in the axial regions, but also at any distances from the axis. The calculated trajectory coincided well with the experimental one. A shortcoming of the method is the cumbersomeness and complexity of the calculations. Translation of abstract Bibliography of 7 titles. N. M.

SUB CODE: 20

Card 2/2

SERGEYEV, M.P., prof.; PEREZHOGIN, M.A., inzh.

Investigating the process of briquetting coarse feeds. Mekh. i
elek. sovs. sel'khoz. 19 no.6:20-22 '61. (MIRA 14:12)

1. Chelyabinskiy institut mekhanizatsii i elektrifikatsii
sel'skogo khozyaystva.
(Feeds—Storage)

PEREZHOGIN, Ye.

Three specialities. Prom.koop. no.4:8 Ap '57. (MLRA 10:7)

1. Val'tsovshchik arteli "Moskhimkrasja."
(Rubber industry)

BURSKIY, V.B., inzh.; PEREZHOVINA, L.S., inzh.

SK-300 ring-shaped illuminant. Svetotekhnika 4 no.9:5-6 S '58.
(MIRA 11:8)

1. Moskovskiy zavod "Elektrosvet."
(School houses—Lighting)

PEREZHOGINA T.P.

BUGOSLAVSKAYA, Ye. Ya.; PEREZHOGINA, T. P.

Photographic observations of bright minor planets. Astron. tsir.
no. 159:3-7 My '55.

(MLRA 8:12)

(Planets, Minor)

PEREZHOGINA, T.P.

Photographic observations of minor planets. Astron. tsir. no.219:
7-16 Mr '61. (MIRA 14:10)

1. Gosudarstvennyy astronomicheskiy institut im. Shternberga,
Moskva.

(Planets, Minor)

PEREZHOGINA, T.P.

Photographic observations of minor planets. Astron. tsir. no.210:1-8
Ap !60. (MIRA 13:9)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga, Moskva.
(Planets, Minor)

SECRET

1. The purpose of this document is to provide information on the activities of the Soviet Union in the field of international law and the role of the Soviet Union in the development of international law.

2. The document is divided into two main parts. The first part discusses the activities of the Soviet Union in the field of international law, and the second part discusses the role of the Soviet Union in the development of international law.

SOV/35-59-9-6978

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 15 (USSR)

AUTHOR: Perezhogina, T.F.

TITLE: Photographic Observations of Bright Minor Planets

PERIODICAL: Astron. tsirkulyar, 1958, September 18, Nr 195, pp 1 - 2

ABSTRACT: The positions of seven minor planets, (Iris, Hebe, Vesta, Melpomene, Harmony, Ceres, Pallas) are given, determined from the plates obtained in 1956 by a wide-angle GAISH astrograph (F = 2.3 m, D = 230 mm)

Card 1/1

S/035/62/000/002/006/051
A001/A101

AUTHOR: Perezhogina, I. P.

TITLE: Photographic observations of asteroids

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 2, 1962, 18,
abstract 2A174 ("Astron. tsirkulyar", 1961, 2 marta, no. 219, 7-10.

TEXT: The author presents the results of observations [1, (1950,0)] of
the following asteroids: Ceres (1), Pallas (2), Juno (3), Hebe (6), Iris (7),
Parthenope (11), Melpomene (18), Leticia (39) and Harmonia (40). The coordinates
were determined from the photographs taken at GAISH in 1958 - 1959 by means of
a wide-angle astrograph (D = 23 cm, F = 230 cm). The list of fundamental stars
and relationships is given.

M. F.

[Abstracter's note: Complete translation]

Card 1/1

SOV/35-59-9-6978

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 15 (USSR)

AUTHOR: Perezhogina, T.F.

TITLE: Photographic Observations of Bright Minor Planets

PERIODICAL: Astron. tsirkulyar, 1958, September 18, Nr 195, pp 1 - 2

ABSTRACT: The positions of seven minor planets, (Iris, Hebe, Vesta, Melpomene, Harmony, Ceres, Pallas) are given, determined from the plates obtained in 1956 by a wide-angle GAISH astrograph (F = 2.3 m; D = 230 mm)

Card 1/1

AGAPOV, E. S.; ANISIMOV, V. F.; MOZHERIN, V. N.; MLONOV, V. B.; PROKOFYEVA, V. V.;
PERFAMEV, V. I.

"The TV observations of faint satellites."

report submitted for 15th Intl Astronautical Cong, Warsaw, 7-12 Sep 64.

VARTANIAN, A.; MANOLOV, A.; PERFANOV, G.; KOLEV, D.; MILIANCHEV; GULUBOV,
St.; KOSTIANEV, St.

Spring soil tilling, and its influence on the development,
yield and quality of tobacco. Izv Inst tiutium BAN 1:73-118
'61.

ZEISKOV, G.V.; PERFENOV, A.K.

Treatment of high-speed steel cutters in a medium of overheated
steam. Nauch.zap.Od.politekh.inst. 26:44-47 '60. (MIRA 15:5)
(Steel--Heat treatment)

PERFILETOV, A.N., inzh.

Ionization of entrapped air in high-voltage polyethylene cable
insulation. Vest. elektroprom. 32 no.11:67-71 N '61. (MIRA 14:11)
(Electric cables)
(Electric insulators and insulation)

MAYZEL', Ye.S.; PERFILETOV, A.N.

Utilization of thickened transformer oil in high-pressure cables.
Khim.i tekhn. topl.i masel 6 no.9:58-61 S '61. (MIRA 14:10)

1. Zavod "Sovkabel".
(Insulating oils) (Electric cables)

NIKOTIN, Pavel Petrovich; PERFILETOV, Aleksandr Nikolayevich;
KAMINSKIY, Viktor Samoylovich[deceased]; KAZARNOVSKIY, D.M.,
red.; ZHITNIKOVA, O.S., tekhn. red.

[Materials for cable manufacture] Materialy kabel'nogo
proizvodstva. Moskva, Gosenergoizdat, 1963. 310 p.
(MIRA 17:1)

PERFILETOVA, P. Ye.

Color reaction of bile in cholepathies in children. Vop. okh. mat. 1
det. 4 no. 6:39-42 N-D '59. (MIRA 13:4)

1. Iz detskoy kliniki (nachal'nik - deystvitel'nyy chlen AMN SSSR
zasluzhennyy deyatel' nauki, prof. M.S. Maslov) Voenno-meditsin-
skoy ordena Lenina akademii imeni S.M. Kirova.
(BILB)

PEREZHOGINA, T.P.

Photographic observations of minor bright planets. Astron. tsir.
no.199:3-8 Ja '59. (MIRA 13:2)

1.Gosudarstvennyy astronomicheskiy institut im. P.K. Shternberga, Moskva.
(Planets, Minor)

PEREZHOGINA, T.P.

Photographic observations of bright minor planets. Astron. tsir.
no.195:1-3 S '58. (MIRA 12:12)

1.Gosudarstvennyy astronomicheskiy institut im. P.K. Shternberga
(GAISH, Moskva.
(Planets, Minor)

PEREZHOVINA, T.P.

Photographic observations of bright minor planets. Astron. tsir.
no.178:4-7 Mr '57. (MLRA 10:9)

(Planets, Minor)

PEREZHOGINA, T.P.
BUGOSLAVSKAYA, Ye. Ya.; PEREZHOGINA, T. P.

Photographic observations of minor planets on the 380-millimeter
astrolabe at Moscow Observatory. Astron. tsir. no. 159:2-3 Ny'55.
(Planets, Minor) (MIRA 8:12)

PERFAN'YAK, P.; YEFIMOV, L.; BLYUMBERG, K.

Books on the analysis of the management of enterprises. Den. 1 kred.
12 no.6:52-59 D '54. (MIRA 8:4)
(Industrial management)

PERFENTJEV, L. N.

"Action de l'orthoformiate d'ethyle sur le diacetyle et l'acetylacetone." by L. N. Perfentiev
and A. M. Mirsasy. (p 707)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1941, vol 11, no 9.

The hydrogen film on a polarized metallic cathode
G. I. Priglas, *Sovetskii Khimicheskii Vestnik* 1955,
No. 3, 168. — The polarization capacity of the H film
formed on the electrode in cathodic polarization depends
upon the density and frequency of the a. c. The depend-
ence of the capacity of the Hg cathode upon the potential
ence is expressed by a curve with a sharply marked minimum.
The H overvoltage diminishes with increase in the capac-

ity and the diminution of the active resistance of the
polarization condenser under the influence of the a. c.
B. V. Shvartzberg

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSING AND PROPERTIES INDEX																			
The Hydrogen Film on a Polarized Metallic Electrode. G. Perfilov. (Soviet. <i>Relomatskiye i Nauka</i>, 1988, (3), 168; C. Abs., 1933, 29, 7826). -- [In Russian.] The polarization capacity of the hydrogen film formed on the electrode in cathodic polarization depends on the density and frequency of the a.c. The dependence of the capacity of the mercury cathode on the potential is expressed by a curve with a sharply marked maximum. The hydrogen overvoltage diminishes with increase in the capacity and the diminution of the active resistance of the polarization condenser under the influence of the a.c. --R. U.																			
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION																			

PERFI'EV, I.A.

PERFI'EV, I.A. ... Flora Severnogo kraia ... Arkhangel'sk, Severnoe kraenoe izdatel'stvo, 1934.

"Ispol'zovannaya literatura": pt. 2/3, p. 393-398

Contents. -pt. 1. Vysshie sporovye golosemiannye i otdol'nye. -pt. 2/3. Dvudol'nye.

DA

SO: LC, Soviet Geography, Part I, 1951, Uncl.

PERFIL'EV, I.A.

PERFIL'EV, I.A. Materialy k flore ostrovov Novoi Zemli i Kolgueva. Arkhangel'sk, 1928.
73 p.

DLG: Unclass.

SO: IC, Soviet Geography, Part I, 1951, Uncl.

PERFIL'YEV, I. A.

PERFIL'YEV, I. A.....Materialy k flore ostrovov Novoi Zemli i Kolgueva. Arkhangel'sk,
1923. 73 p. DLC: UNCLASS.

SO: LC, Soviet Geograpay, Part II, 1951/Unclassified

1. PERFIL'EV, V. I.
2. USSR (600)
4. Steam Boilers
7. More about the KRSh-4 boiler.
Sakh. prom. 26 No. 11, 1952

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

Scattering of beryllium photoneutrons by light nuclei
N. Perfil'eva and E. Pedorov. *J. Exptl. Theoret. Phys.*
(U.S.S.R.) 7, 0013 (1967). The values of $\sigma \times 10^{-28}$
 sq. cm. for the effective cross section of photoneutrons as
measured by absorption and scattering through various
elements were Li 1, Be 2.9, B 3.8, C 1.5, N 1.6, O 1.8,
F 6.3, Na 3.3, Mg 8.4, Al 4.0, Si 1.4, S 1.0, all $\pm$ about
30%. Values for compounds are additive. F. H. R.

BC

PROCESSING AND PROPERTY INDEX

Hydrogen film on a polarized metallic cathode. G. PAVULANU (Bota. Reconst. i Nauka, 1935, No. 3, 100).—The polarization capacity of the H film formed on the electrode in cathodic polarization depends on the density and frequency of the a.c. The dependence of the capacity of the Hg cathode on the potential gives a curve with a min. The H over-voltage falls with increase in the capacity.

Cu. Ann. (c)

ADD-SEA METALLURGICAL LITERATURE CLASSIFICATION

BC A-1

PROCESSING AND PROPERTIES INDEX

Scattering of photo-neutrons from beryllium
by light nuclei. E. FEDEROV and N. PERVILINVA
(Fizmat. Z. Sovetskoy, 1937, 11, 640-643).
The cross-sections of light elements (Li-Cl) and
some compounds (mol. wt. 26-58) for scattering of
photo-neutrons have been determined. They do not
increase with at. wt. in the same way as in the case of
heavy atoms. A. J. M.

ASB-22.6 METALLURGICAL LITERATURE CLASSIFICATION

SOV/96-58-10-12/25

AUTHORS: Grishuk, I.K. (Cand.Tech.Sci.)
Sheveleva, V.V. (Engineer)
Perfilov, A.I. (Engineer)

TITLE: The influence that the time of standing in the accumulator tank has on the effectiveness of removal of oxygen from water. (Vliyaniye prodolzhitel'nosti prebyvaniya vody v bake-akkumulyatore na effektivnost' udaleniya kislороda).

PERIODICAL: Teploenergetika, 1958, No.10. pp. 51-53 (USSR)

ABSTRACT: It is usually considered that the removal of oxygen from water is mainly completed in the de-aeration column, and that time of standing in the accumulator tank has no appreciable influence. It is difficult to verify this belief in plant under operating conditions without altering the height through which the jets fall; this alteration affects the results. Tests were made to determine the effect of standing time on the degree of oxygen removal. A full-scale de-aeration installation was used, having two accumulator tanks, each of 20 cu.m. capacity, as sketched in Fig.2. A 200 ton/hr de-aeration column installed over the main tank was connected to the auxiliary tank at both steam-and water-levels. Samples could be taken from either tank. Analyses of the de-aerated water are plotted in Fig.3. and show that the oxygen content in the main tank is greater than that in the auxiliary. This is because the water has

Card 1/2

The influence that the time of standing in the accumulator tank has on the effectiveness of removal of oxygen from water. SOV/96-58-10-12/25

stood longer in the auxiliary tank. In some cases, the water from the main tank contained bubbles that separated out when the sample was taken. When water was drawn equally from both tanks at the rate of 150 tons per hour, the average time of holding in the main tank was 6 minutes and in the auxiliary 18 minutes. The difference between the oxygen contents in the tanks is least when the de-aerator is working under drop-forming conditions. When two tanks are available it is evidently advisable to draw water mainly from the auxiliary tank. There are 3 figures and 2 Soviet references.

ASSOCIATION: All-Union Thermo-Technical Institute, TETs-11, Mosenergo
(Vsesoyuznyy Teplotekhnicheskiy Institut, TETs-11, Mosenergo)

Card 2/2

PERFILOV, I.

USSR (600)

"Vacuum Concrete", a New Building Material

SO: P: Tekhika Molodezhi (Technology for Youth) 1946—Moscow

Abstracted in USAF "Treasure Island", on file in Library of Congress, Air
Information Division, Report No. 073307

PERFILOV, I.

USSR

On Durable Gypsum

SOURCE: P: Tekhnika Molodezhi Moscow (Feb.-March 1946) Abstracted in USAF
"Treasure Island", on file in Library of Congress, Air Information Division,
Report No. 073867

PERFILOV, I. F.

PERFILOV, I.F.

[Provisional instructions for the preparation and use of cementing materials with salts added, for plastering during freezing weather]
Vremennaya instruktsiya po izgotovleniyu i primeniyu stroitel'nykh
rabot na moroze (I-172-53). Moskva, Gos. izd-vo lit-ry po stroitel'stvu
i arkhiterture, 1953. 5 p.
(MLRA 7:7)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva.
(Plastering)

PERFILOV, I.F., inzhener.

Mineral sheets with bituminous binding. Biul.stroi.tekh. 10 no.11:30
Je '53. (MLRA 6:8)

1. Ministerstvo stroitel'stva.

(Insulation (Heat))